



Caltrans Division of Research,
Innovation and System Information

Research Results

Planning/
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Information

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Project Title:

Workshops on Strategies and Best Practices for State Departments of Transportation to Support Commercialization of Electric Vehicles (EV) and Infrastructure TPF-5(250)

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Developing a State Highway Infrastructure for Electric Vehicles

Partnering with other states to share knowledge about implementing EV projects

WHAT WAS THE NEED?

Electric vehicle (EV) technology has the potential to reduce polluting vehicle emissions and help move away from a dependence on oil. The U.S. Department of Energy has targeted several states, including California, to participate in or host transportation electrification projects. California, in addition to Arizona, the District of Columbia, Florida, Michigan, New York, Oregon, Tennessee, Texas, Virginia, and Washington, will serve as test beds for EV technologies. Through these grant awards, local public-private partnerships will collaborate on plans to deploy EVs and the charging infrastructure, a strategy that helps reduce U.S. petroleum dependency and build a clean transportation future.

Transportation agencies, such as Caltrans, public officials, and public policy-makers, need to be prepared to capitalize on the upcoming investment in EV deployment and the infrastructure to support the vehicles. To avoid duplication of efforts, ensure consistency, and maximize the funding resources, the departments of transportation (DOTs) in the participating states are collaborating and sharing research, policies, and practices on implementing an EV infrastructure.

WHAT WAS OUR GOAL?

The goal was to foster partnerships with other states to collaboratively address the opportunities and challenges in developing and implementing an EV infrastructure on state highways.



DRISI provides solutions and knowledge that improve California's transportation system.

WHAT DID WE DO?

Caltrans management met with other executive-level representatives from different states regarding the planning and deployment of EVs and the supporting infrastructure on state highways. The two workshops—held in Berkeley, California and Raleigh, North Carolina—investigated current practices and identified knowledge needs to help DOTs build their capacity and capabilities to work with private partners, as well as federal, state, and local officials.

WHAT WAS THE OUTCOME?

The workshops produced a report that addressed models that DOTs can implement to pursue and incentivize EV deployment. It defined different levels of “readiness to engage,” with an action plan for each level and the appropriate policies and best practices. The information collected from the workshops was also incorporated into the Center for Climate and Energy Solutions (C2ES) Plug-in Electric Vehicle Action Tool, which helps DOTs determine their EV goals and chart a path for accomplishing them.



Caltrans has installed electric vehicle charging stations like this statewide.

WHAT IS THE BENEFIT?

The timing of this effort works in concert with Governor Jerry Brown’s Executive Order B-16-2012, which directs California to “encourage the development and success of zero-emission vehicles to protect the environment, stimulate economic growth and improve the quality of life in the State.” The workshop interactions and cross-state collaboration provided important insights on how to integrate EV development into the planning process, avoid pitfalls and other obstacles, and successfully deploy an EV infrastructure on California highways.

LEARN MORE

To read about the results of the workshops and the Electric Vehicle Action Tool:

www.c2es.org/docUploads/pev-action-tool.pdf

To read about the initiative to integrate EVs with the U.S. electrical grid:

www.c2es.org/initiatives/pev/action-plan-report

